



# Boys should not be overlooked: Sexual violence victimization and associated factors among school-going adolescents in urban Ghana

Emmanuel Nii-Boye Quarshie \*

School of Psychology, University of Leeds, Leeds, United Kingdom

Department of Psychology, University of Ghana, Accra, Ghana

Centre for Suicide and Violence Research (CSVR), Accra, Ghana

## ARTICLE INFO

### Keywords:

Adolescents  
Child sexual abuse  
Sexual abuse  
Sexual violence  
Sexual violence victimization

## ABSTRACT

**Background:** Adolescent sexual violence victimization is still less researched in countries within sub-Saharan Africa, including Ghana.

**Objectives:** To estimate the 12-month prevalence of sexual violence victimization and describe the differences and commonalities in the associated factors between school-going boys and girls in urban Ghana.

**Participants and setting:** Students ( $n = 1692$ ) aged 13–19 years attending Second Cycle Schools in the Greater Accra Region of Ghana participated in this study.

**Methods:** This is a cross-sectional survey involving the use of a self-report anonymous questionnaire. Items measuring sexual violence victimization and correlates were adopted from the 2012 WHO–Global School-based Student Health Survey. Data analysis involved bivariable and multivariable approaches.

**Results:** Overall, 17.6% (95% confidence interval [CI] 15.7, 19.4) adolescents (males = 10.4% [95% CI 8.3, 13.6]; females = 24.3% [95% CI 21.5, 27.3]) reported sexual violence victimization during the previous 12 months. Girls (compared to boys) were nearly three times more likely to report sexual violence victimization (aOR = 2.74, 95% CI 2.01, 3.74,  $p < 0.001$ ). Breakup, sexual minority status, and conflict with parents were uniquely associated with sexual violence victimization among females. Regardless of gender, adolescents who were in a romantic relationship (aOR = 1.63, 95% CI 1.19, 2.24,  $p = 0.002$ ) and reported physical abuse victimization (aOR = 1.84, 95% CI 1.36, 2.49,  $p < 0.001$ ) were more likely to report sexual violence victimization.

**Conclusions:** The prevalence of sexual violence victimization among school-going adolescents in urban Ghana compares with estimates from sub-Saharan Africa, but also warrants the need for universal and targeted prevention regimes against the offence in both boys and girls.

## 1. Introduction

The World Health Organization (WHO) defines sexual violence as “any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic, or otherwise directed, against a person's sexuality using coercion, by any person regardless of their relationship to the victim, in any setting, including but not limited to home and work” (Krug, Dahlberg, Mercy, Zwi, & Lozano,

\* School of Psychology, University of Leeds, Lifton Place, Leeds LS2 9JT, West Yorkshire, United Kingdom.

E-mail addresses: [e.n.quarshie@leeds.ac.uk](mailto:e.n.quarshie@leeds.ac.uk), [enquarshie@gmail.com](mailto:enquarshie@gmail.com).

<https://doi.org/10.1016/j.chiabu.2021.105227>

Received 16 July 2020; Received in revised form 29 June 2021; Accepted 22 July 2021

Available online 2 August 2021

0145-2134/© 2021 Elsevier Ltd. All rights reserved.

2002, p. 149). Globally, one out of every 20 girls aged 15–19 years (totaling about 13 million) have experienced forced sex in their lifetime (UNICEF, 2014b). Among community samples, the mean prevalence estimate is lower among boys (7.9%, 95% confidence interval [CI] 6.0–10.3), compared with girls (19.7% [95% CI 16.7–23.0]) (Pereda, Guilera, Forns, & Gómez-Benito, 2009). The 1-year pooled estimate of severe physical violence, emotional violence, sexual violence, bullying, or witnessing violence among children and adolescents in Africa is 50%, compared to 12% in Europe and 7% in Oceania (Hillis, Mercy, Amobi, & Kress, 2016). In high-income countries, evidence from the USA, for example, suggests an overall higher lifetime prevalence estimate of sexual violence victimization among school-going adolescent girls (26.6%), relative to adolescent boys [5.1%] (Finkelhor, Shattuck, Turner, & Hamby, 2014). Regardless of ethnic background, school-going girls are five times more likely than school-going boys to report sexual violence victimization (Saewyc, Pettingell, & Magee, 2003). Across low- and middle-income countries (LAMICs), particularly, those in sub-Saharan Africa, including Ghana, sexual abuse of (school-going) children and adolescents have received less research attention (Adjei & Saewyc, 2017; Badoe, 2017; Meinck, Cluver, Boyes, & Mhlongo, 2014; Veenema, Thornton, & Corley, 2015).

Sexual violence victimization has telling effects on survivors (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002; UNICEF, 2014b; UNICEF et al., 2020). Besides negative interpersonal and social problems and poor academic outcomes, sexual violence victimization among adolescents is associated with a wide-ranging negative physical and mental health outcomes, including sexually transmitted infections, head trauma, broken bones, anxiety, depression, post-traumatic stress disorder, self-harm and suicidal behaviours (Alix et al., 2020; Daignault & Hebert, 2009; Klonsky & Moyer, 2008; Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002; McTavish, Sverdlichenko, MacMillan, & Wekerle, 2019; Quarshie, Waterman, & House, 2020b; UNICEF, 2014b; Wells, McCann, Adams, Voris, & Dahl, 1997).

Compared to high-income countries, risks and protective factors associated with adolescent sexual violence victimization are still less researched in LAMICs, including those in Africa (Meinck, Cluver, Boyes, & Mhlongo, 2014; Veenema, Thornton, & Corley, 2015). Available evidence from LAMICs has identified female gender, exposure to bullying, dysfunctional family context, poor parenting and parent-child conflictual relationships, disability, young age, lack of parental supervision, belonging to a polygamous family, sexual and gender minority, and orphanhood as factors associated with sexual violence victimization (Elbedour, Abu-Bader, Onwuegbuzie, Abu-Rabia, & El-Aassam, 2006; Emond, 2020; Kidman & Palermo, 2016; Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002; Marsh, Dobson, & Maddison, 2020; Meinck, Cluver, Boyes, & Mhlongo, 2014; Müller et al., 2021; Sumner et al., 2016; Veenema, Thornton, & Corley, 2015).

In Ghana, systematic content analyses of media reports have identified various forms of sexual violence victimization among children and adolescents, including gang rape and incest (Quarshie et al., 2018; Quarshie, Osafo, Akotia, Pephrah, & Andoh-Arthur, 2017). However, “very little data is available on the actual prevalence of sexual abuse” in Ghana (Ministry of Gender Children and Social Protection & UNICEF, 2015, p. 37). Little is still known about the prevalence of sexual violence victimization among students in Second Cycle Schools (i.e., senior high schools, technical schools, and vocational schools) in Ghana (Ministry of Gender Children and Social Protection & UNICEF, 2015; Ohene, Johnson, Atunah-Jay, Owusu, & Borowsky, 2015), although recent media reports and anecdotal evidence from the country have identified sexual abuse of underperforming students by some teachers (Abbey, 2020).

The 2012 Ghana WHO Global School-based Student Health Survey showed a lifetime prevalence estimate of 18.6% among senior high school students (Ohene, Johnson, Atunah-Jay, Owusu, & Borowsky, 2015). A national household survey (conducted in 2015) showed lifetime estimates of 38.2% among female adolescents and 19.4% among males aged 15–19, and 12-month estimates of 22.1% among female adolescents and 19.4% among males aged 15–19 years (Institute of Development Studies et al., 2016). Thus far, however, no evidence on gender specific commonalities and differences regarding the associated factors exclusively among school-going adolescents in Ghana has been published. The position of the current study is that any sound research that contributes to addressing these knowledge gaps can be potentially informative and useful for the designing of intervention and prevention programs (Jewkes, Stern, & Ramsommar, 2019; Russell, Higgins, & Posso, 2020; UNICEF, 2014b).

### 1.1. Aim of study

- i. Estimate the 12-month prevalence of sexual violence victimization among adolescents attending Second Cycle Schools in urban Ghana (in this study, adolescents denote persons aged 10–19 years).
- ii. Identify the overall, and gender differences and commonalities in the socio-demographic factors, and personal and social adversities associated with sexual violence victimization among adolescents attending Second Cycle Schools in urban Ghana.

## 2. Methods

### 2.1. Design, setting, and participants

This study used a cross-sectional self-report anonymous questionnaire survey data collected in 2017, as part of a doctoral (PhD) research project in Ghana; thus, the methodology and specific ethical considerations have been fully reported elsewhere (Quarshie, 2019; Quarshie, Shuweihi, Waterman, & House, 2021). Ghana is a Western sub-Saharan African country known to be the first country to ratify and adopt the UN Convention on the Rights of the Child. The country has relatively comprehensive child protection legal frameworks, supported by the country's Constitution and the Children's Act 1998. Ghana's Ministry of Gender, Children and Social Protection is mandated (among other functions) to coordinate and ensure gender equality and equity, and promote the survival, social protection and development of children and other vulnerable persons in the country. Persons aged 10–19 years represent 22.4% of Ghana's population; thus, Ghana's population has been generally described as youthful, as two in every five persons in the country are

younger than 15 years (Ghana Statistical Service, 2013).

The survey component of the project followed the community-agreed recommendations of Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement (Von Elm et al., 2007). In brief, the survey involved a randomly selected sample of 1723 students in 20 Second Cycle Schools, and 384 street-connected young people in the Greater Accra region. A street-connected young person is an individual aged between 10 and 25 years, who was born on the street and lives with parent(s) on the street, migrated to the street, or is an urban poor child or street mother who survives by working in the street (Department of Social Welfare et al., 2011).

The present study draws on data provided by the students (aged 13–19) in Second Cycle Schools. Students in the final sample were typically not different from those who declined to participate or the general population of Second Cycle School students; the non-participating and participating schools were also similar regarding key school characteristics and features of location (Quarshie, 2019). In the 20 participating schools, a two-stage sampling approach was used. In the first stage, schools were selected with probability proportional to the student population size; in the second stage, classes were selected and all students in each selected class were invited to respond to the survey. A total of 1928 students were invited to participate in the study, but 1723 responded to the survey, yielding a response rate of 89.4%. Fig. 1 illustrates the analytic sample selection process and the criteria for inclusion and exclusion.

The final analytic sample included in the current study comprised 1692 Second Cycle School students aged between 13 and 19 years (Fig. 1). In the original larger dataset ( $n = 2107$ ), the students ( $n = 1723$ ; 81.8%) were proportionally higher than the street-connected adolescents ( $n = 384$ ; 18.2%), but more importantly, the students were typically different from the street-connected adolescents. Relatively, the street-connected adolescents were more vulnerable and exposed to many health problems and social adversities, and less likely to benefit from the protective effects of living with family and attending school (Quarshie, 2019).

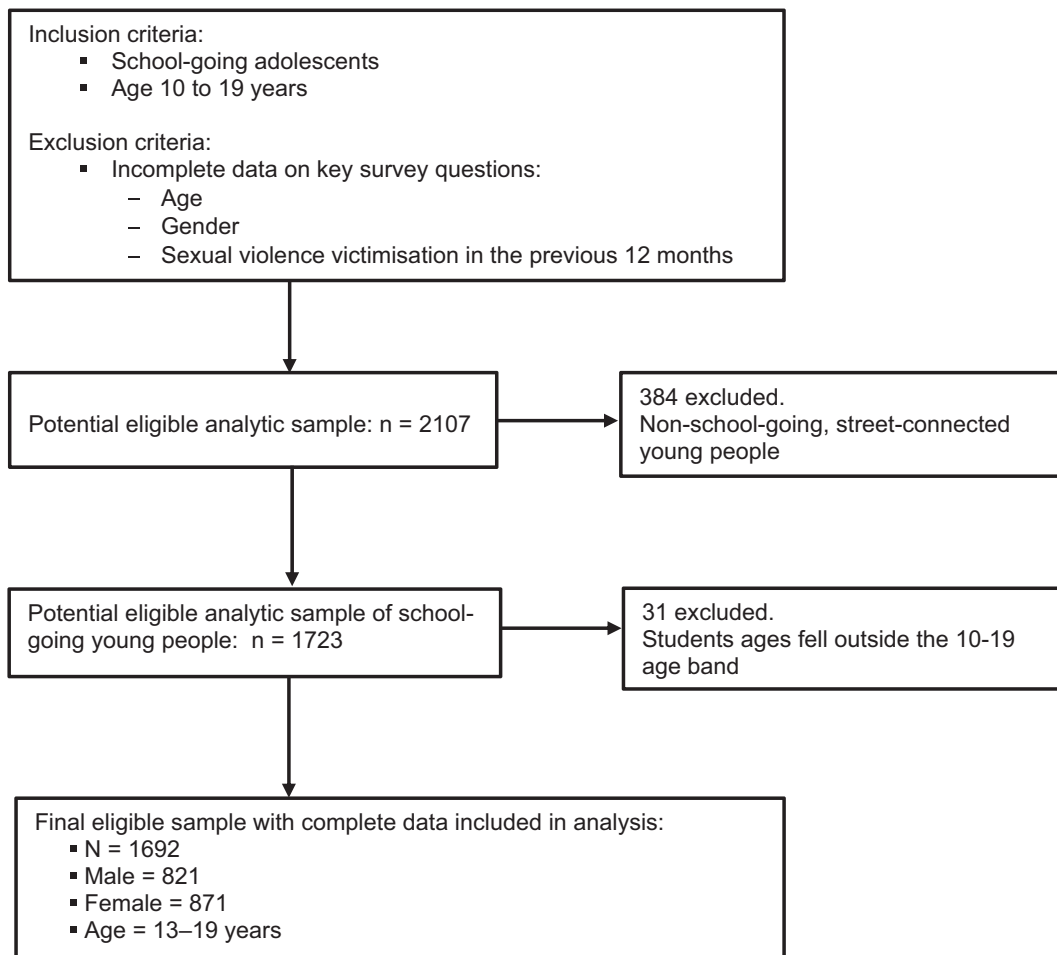


Fig. 1. Flow diagram of analytic sample selection process and criteria.

## 2.2. Measures

The participants responded to a self-report anonymous questionnaire made up of questions assessing socio-demographic background, personal/lifestyle factors and social adversity, and sexual violence victimization.

### 2.2.1. Socio-demographic variables

Nine social characteristics and demographic background were included in this analysis: gender (female or male), age, family structure (measured by father's number of wives), living arrangement, primary caretaker, caretaker's employment status, religious group, sexual orientation, and romantic relationship status.

### 2.2.2. Personal/lifestyle factors and social adversity

This included nine dichotomous (No or Yes) response-rated personal/lifestyle factors and variables assessing the experience of social/interpersonal adversities, adopted mainly from the 2012 WHO–Global School-based Student Health Survey (WHO-GSHS) questionnaire used in Ghana (Owusu, 2012). These variables included *weekly alcohol use* (In a typical week, how many times do you have at least one alcoholic drink?), *parental separation/divorce* (Have your parents separated or divorced during the past 12 months?), *conflict with parents* (Have you had any serious arguments or fights with either or both of your parents during the past 12 months?), *conflict between parents* (Have your parents had any serious arguments or fights during the past 12 months?), and *bullying victimization* (During the past 12 months, how many days were you bullied?). The supplementary material (e-Table 1) provides the list of variables and specific survey questions used to assess them.

### 2.2.3. Sexual violence victimization

A binary (No or Yes) response-rated single item was used to assess this variable: "During the past 12 months, has anyone forced you (i.e. physically or verbally) to engage in sexual activities against your will?". This item was also adopted from the WHO-GSHS Ghana questionnaire (Owusu, 2012).

## 2.3. Procedure

The survey was conducted between May and September 2017. In each school, the participants were gathered in the assembly hall or a larger classroom designated for the survey, with sitting arrangement spaced by reasonable distance. The questionnaire was in English, the official language and lingua franca in Ghana and the language of instructions in schools within the country. The questionnaire was expert-reviewed in Accra prior to the survey. Averagely, the completion of the questionnaire lasted between 22 and 45 min. Upon completing the survey, each participant put their answered questionnaire in an opaque box placed near the exit door.

## 2.4. Ethics

This study received ethical approval from two Institutional Review Boards (the School of Psychology Ethics Committee, University of Leeds, UK, [Ref. N<sup>o</sup>: 16-0373] and the Ethics Committee for the Humanities, University of Ghana, Accra, Ghana [Ref. N<sup>o</sup>: ECH078/16-17]). Each participant signed a written consent form prior to responding to the survey; parents/guardians of underage participants provided consent and the researcher obtained the assent of participants aged 13–17 years, prior to taking part in the study. In keeping with the Ghana Education Service school research ethics, permissions were sought from the heads and management of participating schools.

## 2.5. Data analysis

The Statistical Package for Social Sciences (SPSS version 26.0 for Windows) was used for the analysis. Sexual violence victimization was the outcome variable, while the exposure variables or correlates were composed of the personal factors and variables of social adversity specified; the socio-demographic variables were included as covariates. The list-wise deletion of missing data strategy was used — the loss of cases due to missing data was less than 5% (Graham, 2012). In this circumstance the loss of power and biases are likely to be inconsequential, particularly, in logistic regression (Graham, 2009, 2012). The supplementary material (e-Table 1) shows the proportion of missing data for each variable included in the analysis. The data analysis involved two steps, for each step the data was stratified by gender (female and male), guided by the aims of the study. Step 1 involved descriptive analysis, by applying frequencies and proportions to assess the distribution of the socio-demographic variables, and to estimate the 12-month prevalence of sexual violence victimization. Additionally, given the categorical nature of the data, the Pearson's Chi-square test ( $\chi^2$ ) was used to explore the bivariable relationships between sexual violence victimization and each of the socio-demographic variables, and personal factors and social adversity. Where a cell expected count was less than 5, Fisher's exact test was used (Kim, 2017). Point biserial correlation test (Prematunga, 2012) was performed to assess the association between the continuous variable (age) and sexual violence victimization. Statistically significant results were determined using the *p*-value less than 0.05 ( $p < 0.05$ ). Step 2 involved multi-variable logistic regression, to assess the possible associations between the binary outcome variable (sexual violence victimization during the previous 12 months: No or Yes) and the specified correlates (personal factors, and variables of social adversity) and covariates (socio-demographic variables). Three models were developed, one each for the overall sample, female sub-sample, and male sub-sample. As recommended by leading methodologists in logistic regression modelling, the candidate correlates were included in the

**Table 1**  
Sample characteristics, and bivariable associations

	Sample n (%)	Overall sample (N = 1692)				Males (n = 821)				Females (n = 871)			
		Sexual violence victimization				Sexual violence victimization				Sexual violence victimization			
		No n (%)	Yes n (%)	$\chi^2$	p	No n (%)	Yes n (%)	$\chi^2$	p	No n (%)	Yes n (%)	$\chi^2$	p
<b>Socio-demographic variables</b>													
Gender				57.13	<0.001								
Male	821 (48.5)	736 (89.6)	85 (10.4)										
Female	871 (51.5)	659 (75.7)	212 (24.3)										
Family structure				44.24	<0.001			6.77	0.009			37.13	<0.001
Father has 1 wife	1265 (74.8)	1088 (86.0)	177 (14.0)			569 (91.2)	55 (8.8)			519 (81.0)	122 (19.0)		
Father has >1 wife	426 (25.2)	306 (71.8)	120 (28.2)			166 (84.7)	30 (15.3)			140 (60.9)	90 (39.1)		
Living arrangement				12.18	0.002			10.92	0.004			4.36	0.113
One or both parents	1312 (77.5)	1103 (84.1)	209 (15.9)			586 (91.4)	55 (8.6)			517 (77.0)	154 (23.0)		
Other relative	289 (17.1)	226 (78.2)	63 (21.8)			111 (84.7)	20 (15.3)			115 (75.8)	43 (27.2)		
Alone or with another person	91 (5.4)	66 (72.5)	25 (27.5)							27 (64.3)	15 (35.7)		
Primary caretaker				18.91	<0.001			15.39	<0.001			6.29	0.043
One or both parents	1426 (84.3)	1199 (84.1)	227 (15.9)			643 (90.9)	64 (9.1)			556 (77.3)	163 (22.7)		
Other relative	176 (10.4)	134 (76.1)	42 (23.9)			65 (86.7)	10 (13.3)			69 (68.3)	32 (31.7)		
Myself or another person	90 (5.3)	62 (68.9)	28 (31.1)			28 (71.8)	11 (28.2)			34 (66.7)	17 (33.3)		
Primary caretaker's employment status				3.31	0.069			1.66	0.198			0.99	0.319
Unemployed	123 (7.3)	94 (76.4)	29 (23.6)			43 (84.3)	8 (15.7)			51 (70.8)	21 (29.2)		
Employed	1568 (95.7)	1300 (82.9)	268 (17.1)			692 (90.0)	77 (10.0)			608 (76.1)	191 (23.9)		
Religious group				2.01	0.156			0.51	0.476			1.72	0.189
Christian	1549 (91.9)	1271 (82.1)	278 (17.9)			674 (89.5)	79 (10.5)			597 (75.0)	199 (25.0)		
Muslim	137 (8.1)	119 (86.9)	18 (13.1)			60 (92.3)	5 (7.7)			59 (81.9)	13 (18.1)		
Sexual orientation				14.43	<0.001			2.78	0.106			9.39	0.002
Heterosexual	1642 (97.2)	1364 (83.1)	278 (16.9)			721 (89.9)	81 (10.1)			643 (76.5)	197 (23.5)		
LGBT	47 (2.8)	29 (61.7)	18 (38.3)			14 (77.8)	4 (22.2)			15,951.7)	14 (48.3)		
In romantic relationship				78.46	<0.001			22.66	<0.001			43.31	<0.001
No	1065 (62.9)	945 (88.7)	120 (11.3)			524 (93.1)	39 (6.9)			421 (83.9)	81 (16.1)		
Yes	627 (37.1)	450 (71.8)	177 (28.2)			212 (82.2)	46 (17.8)			238 (64.5)	131 (35.5)		
<b>Personal lifestyle factors and social adversity</b>													
Weekly alcohol use				29.56	<0.001			13.44	<0.001			27.17	<0.001
Never	1473 (87.1)	1243 (84.4)	230 (15.6)			632 (91.3)	60 (8.7)			611 (78.2)	170 (21.8)		
≥1 drink	560 (12.9)	152 (69.4)	67 (30.6)			104 (80.6)	25 (18.4)			48 (53.3)	42 (46.7)		
Parental separation/divorce				30.95	<0.001			3.04	0.081			23.93	<0.001
No	1130 (66.9)	973 (86.1)	157 (13.9)			526 (90.8)	53 (9.2)			447 (81.1)	104 (18.9)		
Yes	560 (33.1)	421 (75.2)	139 (24.8)			210 (86.8)	32 (13.2)			211 (66.4)	107 (33.6)		

(continued on next page)

Table 1 (continued)

	Sample n (%)	Overall sample (N = 1692)				Males (n = 821)				Females (n = 871)			
		Sexual violence victimization				Sexual violence victimization				Sexual violence victimization			
		No n (%)	Yes n (%)	$\chi^2$	<i>p</i>	No n (%)	Yes n (%)	$\chi^2$	<i>p</i>	No n (%)	Yes n (%)	$\chi^2$	<i>p</i>
Conflict with parents				<b>94.51</b>	<b>&lt;0.001</b>			<b>12.79</b>	<b>&lt;0.001</b>			<b>71.43</b>	<b>&lt;0.001</b>
No	1312 (77.6)	1145 (87.3)	167 (12.7)			611 (91.5)	57 (8.5)			534 (82.9)	110 (17.1)		
Yes	379 (22.4)	249 (65.7)	130 (34.3)			125 (81.7)	28 (18.3)			124 (54.9)	102 (45.1)		
Conflict between parents				<b>29.23</b>	<b>&lt;0.001</b>			<b>4.89</b>	<b>0.027</b>			<b>19.72</b>	<b>&lt;0.001</b>
No	978 (57.8)	848 (86.7)	130 (13.3)			463 (91.5)	43 (8.5)			385 (81.6)	87 (18.4)		
Yes	713 (42.2)	546 (76.6)	167 (23.4)			273 (86.7)	42 (13.3)			273 (68.6)	125 (31.4)		
Schoolwork problems				<b>55.95</b>	<b>&lt;0.001</b>			<b>6.30</b>	<b>0.012</b>			<b>45.66</b>	<b>&lt;0.001</b>
No	1098 (64.9)	961 (87.5)	137 (12.5)			514 (91.5)	48 (8.5)			447 (83.4)	89 (16.6)		
Yes	593 (35.1)	433 (73.0)	160 (27.0)			222 (85.7)	37 (14.3)			211 (63.2)	123 (36.8)		
Truancy				<b>11.0</b>	<b>0.001</b>			<b>2.65</b>	<b>0.104</b>			<b>11.97</b>	<b>0.001</b>
≤5 days	1536 (90.9)	1281 (83.4)	255 (16.6)			665 (90.2)	72 (9.8)			616 (77.1)	183 (22.9)		
>5 days	154 (9.1)	112 (72.7)	42 (27.3)			71 (84.5)	13 (15.5)			41 (58.6)	29 (41.4)		
Breakup				<b>113.13</b>	<b>&lt;0.001</b>			<b>19.99</b>	<b>&lt;0.001</b>			<b>94.16</b>	<b>&lt;0.001</b>
No	1281 (75.8)	1128 (88.1)	153 (11.9)			583 (92.2)	49 (7.8)			545 (84.0)	104 (16.0)		
Yes	410 (24.2)	267 (65.1)	143 (34.9)			153 (81.0)	36 (19.0)			114 (51.6)	107 (48.4)		
Bullying victimization				<b>30.65</b>	<b>&lt;0.001</b>			<b>8.82</b>	<b>0.003</b>			<b>36.55</b>	<b>&lt;0.001</b>
No	1187 (70.2)	1018 (85.8)	169 (14.2)			491 (91.9)	43 (8.1)			527 (80.7)	126 (19.3)		
Yes	503 (29.8)	375 (74.6)	128 (25.4)			244 (85.3)	42 (14.7)			131 (60.4)	86 (39.6)		
Physical abuse victimization				<b>89.07</b>	<b>&lt;0.001</b>			<b>26.65</b>	<b>&lt;0.001</b>			<b>50.70</b>	<b>&lt;0.001</b>
No	1155 (68.3)	1021 (88.4)	134 (11.6)			557 (93.0)	42 (7.0)			464 (83.5)	92 (16.5)		
Yes	537 (31.7)	374 (69.6)	163 (30.4)			179 (80.6)	43 (19.4)			195 (61.9)	120 (38.1)		

Notes:  $\chi^2$  = Chi square test; *p* = *p*-value; statistically significant results in boldface.

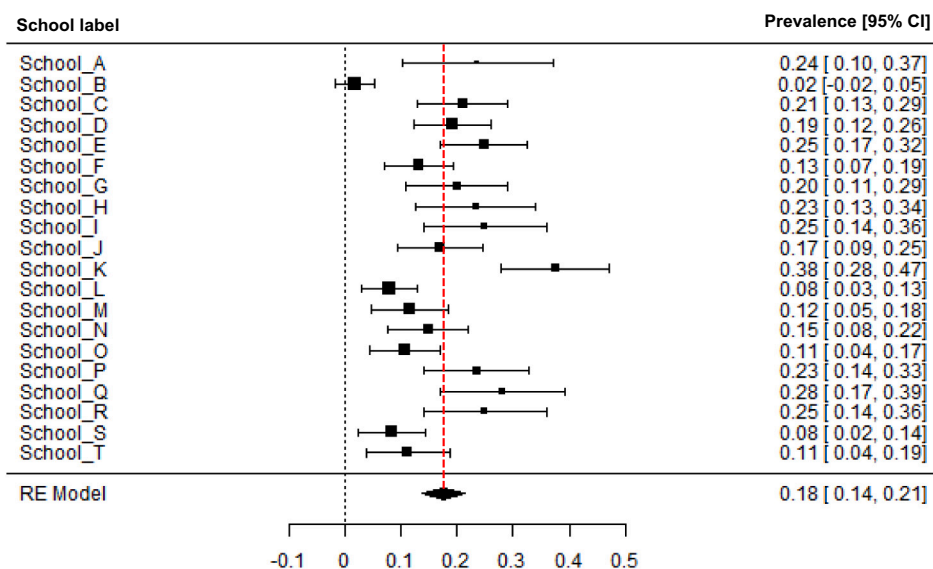


Fig. 2. Summary of 12-month prevalence estimates of self-reported sexual violence victimization across and within schools.

multivariable logistic regression models regardless of the statistical significance of their bivariable relationship with the outcome variable (Babyak, 2004; Sun, Shook, & Kay, 1996). Results of the logistic regression are reported as odds ratios with 95% confidence intervals (CI) and  $p$ -values (Greenland et al., 2016).

### 3. Results

#### 3.1. Sample characteristics

Table 1 shows the sample characteristics, stratified by gender. The participants ( $n = 1692$ ) in this study were aged 13–19 years (mean = 16.8; modal = 17; SD = 1.1); 871 (51.5%) were females and 821 (48.5%) were males. Most of participants (77.5%) were living with both parents and identified their family as monogamous — their father had one wife (74.8%); about 2.8% ( $n = 47$ ) identified as lesbian, gay, bisexual or transgender (LGBT), while 37.1% ( $n = 627$ ) self-reported as being in a romantic relationship.

#### 3.2. Prevalence estimates of sexual violence victimization

As shown in Table 1, overall, 17.6% (95% CI = 15.7, 19.4) of the participants reported sexual violence victimization during the previous 12 months, representing more females (24.3% [95% CI = 21.5, 27.3]) than males (10.4% [95% CI = 8.3, 13.6]). Fig. 2 presents the pooled 12-month prevalence estimates of sexual violence victimization reported within and across the 20 participating schools.

Fig. 2 shows that apart from Schools B, K, L, and S, the reported estimates cluster somewhat closely among the majority of the schools — a plausible indication that sexual violence victimization may be a common problem across Second Cycle Schools in the Greater Accra Region.

#### 3.3. Bivariable associations

Again, Table 1, indicates that, overall, the bivariable analysis showed significant associations between sexual violence victimization and most of the socio-demographic variables, and personal factors and social adversity included in this study.

Females were more likely than males ( $\chi^2_{(1)} = 57.13, p < 0.001$ ) to report sexual violence victimization. Overall, regardless of gender, conflict with parents ( $\chi^2_{(1)} = 94.51, p < 0.001$ ), physical abuse victimization ( $\chi^2_{(1)} = 89.07, p < 0.001$ ), and being in a romantic relationship ( $\chi^2_{(1)} = 78.46, p < 0.001$ ) showed strong bivariable associations with sexual violence victimization.

Across the overall sample, there was a positive correlation between age and sexual violence victimization during the previous 12 months ( $r_{pb} = 0.101, n = 1692, p = 0.001$ ). When stratified by gender, there was a positive association between age and sexual violence victimization among males ( $r_{pb} = 0.110, n = 5821, p = 0.002$ ) and females ( $r_{pb} = 0.098, n = 871, p = 0.004$ ).

#### 3.4. Multivariable associations

As shown in Table 2, the final logistic regression models for the overall sample ( $\chi^2_{(df=20)} = 301.05, p < 0.001$ ), male subsample ( $\chi^2$

( $df=19$ ) = 65.83,  $p < 0.001$ ) and the female subsample ( $\chi^2_{(df=19)} = 194.95$ ,  $p < 0.001$ ) were statistically significant, accounting for satisfactory proportions of the variance in the overall sample (84.2%), male sample (90.2%), and female sample (79.9%).

### 3.5. Factors associated with sexual violence victimization

Table 2 shows that, overall, being a female (aOR = 2.74, 95% CI 2.01, 3.74;  $p < 0.001$ ), having had a breakup (aOR = 2.29, 95% CI 1.66, 3.18;  $p < 0.001$ ), identifying as a sexual or gender minority — LGBT (aOR = 2.21, 95% CI 1.09, 4.46;  $p = 0.028$ ), conflict with parents (aOR = 1.79, 95% CI 1.29, 2.49;  $p = 0.001$ ), being in a polygamous family (aOR = 1.61, 95% CI 1.16, 2.26;  $p = 0.005$ ),

**Table 2**  
Multivariable associations.

	Model 1: overall sample				Model 2: male sample				Model 3: female sample			
	$\beta$	aOR	95% CI	p-Value	$\beta$	aOR	95% CI	p-Value	$\beta$	aOR	95% CI	p-Value
Socio-demographic variables												
Gender	<b>1.01</b>	<b>2.74</b>	<b>2.01, 3.74</b>	<b>&lt;0.001</b>								
Age	0.04	1.04	0.91, 1.19	0.595	0.13	1.13	0.91, 1.42	0.270	-0.03	0.97	0.82, 1.16	0.774
Family structure	<b>0.48</b>	<b>1.61</b>	<b>1.16, 2.26</b>	<b>0.005</b>	0.25	1.29	0.72, 2.30	0.396	<b>0.58</b>	<b>1.78</b>	<b>1.16, 2.73</b>	<b>0.008</b>
Living arrangement												
One or both parents	Reference				Reference				Reference			
Other relative	-0.01	0.99	0.64, 1.54	0.966	0.33	1.38	0.69, 2.77	0.356	-0.28	0.76	0.42, 1.36	0.352
Alone or with another person	0.44	1.56	0.85, 2.87	0.153	0.54	1.72	0.68, 4.37	0.253	0.35	1.41	0.62, 3.20	0.405
Primary caretaker												
Other relative	0.29	1.33	0.79, 2.22	0.273	-0.01	0.99	0.41, 2.37	0.983	0.52	1.68	0.86, 3.26	0.126
Myself or another person	0.09	1.10	0.59, 2.04	0.762	0.59	1.81	0.69, 4.79	0.230	-0.23	0.79	0.36, 1.77	0.574
Primary caretaker's employment status	0.01	1.01	0.61, 1.69	0.964	-0.11	0.89	0.37, 2.21	0.817	0.04	1.05	0.55, 1.98	0.890
Religious group	-0.23	0.79	0.45, 1.39	0.421	-0.40	0.67	0.25, 1.79	0.424	-0.10	0.90	0.44, 1.85	0.783
Sexual orientation	<b>0.79</b>	<b>2.21</b>	<b>1.09, 4.46</b>	<b>0.028</b>	0.38	1.46	0.41, 5.13	0.557	<b>0.96</b>	<b>2.61</b>	<b>1.04, 6.52</b>	<b>0.040</b>
In romantic relationship	<b>0.49</b>	<b>1.63</b>	<b>1.19, 2.24</b>	<b>0.002</b>	<b>0.57</b>	<b>1.76</b>	<b>1.03, 3.02</b>	<b>0.039</b>	<b>0.49</b>	<b>1.64</b>	<b>1.09, 2.45</b>	<b>0.016</b>
Personal/lifestyle factors and social adversity												
Weekly alcohol use	0.31	1.37	0.93, 2.01	0.116	0.46	1.59	0.89, 2.82	0.116	0.37	1.45	0.84, 2.52	0.183
Parental separation/divorce	0.02	1.02	0.73, 1.43	0.890	-0.16	0.85	0.48, 1.51	0.579	0.11	1.12	0.73, 1.71	0.603
Conflict with parents	<b>0.58</b>	<b>1.79</b>	<b>1.29, 2.49</b>	<b>0.001</b>	0.26	1.29	0.72, 2.32	0.382	<b>0.76</b>	<b>2.13</b>	<b>1.40, 3.23</b>	<b>&lt;0.001</b>
Conflict between parents	0.00	1.00	0.73, 1.37	0.999	0.12	1.12	0.66, 1.89	0.665	-0.09	0.91	0.61, 1.36	0.637
Schoolwork problems	<b>0.46</b>	<b>1.59</b>	<b>1.18, 2.13</b>	<b>0.002</b>	0.05	1.05	0.62, 1.77	0.850	<b>0.68</b>	<b>1.97</b>	<b>1.36, 2.85</b>	<b>&lt;0.001</b>
Truancy	0.12	1.13	0.71, 1.78	0.608	0.05	1.05	0.52, 2.12	0.900	0.15	1.16	0.61, 2.20	0.646
Breakup	<b>0.83</b>	<b>2.29</b>	<b>1.66, 3.18</b>	<b>&lt;0.001</b>	0.52	1.69	0.97, 2.96	0.066	<b>1.01</b>	<b>2.74</b>	<b>1.82, 4.15</b>	<b>&lt;0.001</b>
Bullying victimization	<b>0.39</b>	<b>1.48</b>	<b>1.09, 2.01</b>	<b>0.013</b>	0.35	1.42	0.85, 2.38	0.184	<b>0.46</b>	<b>1.58</b>	<b>1.06, 2.35</b>	<b>0.024</b>
Physical abuse victimization	<b>0.61</b>	<b>1.84</b>	<b>1.36, 2.49</b>	<b>&lt;0.001</b>	<b>0.76</b>	<b>2.14</b>	<b>1.27, 3.61</b>	<b>0.005</b>	<b>0.54</b>	<b>1.72</b>	<b>1.17, 2.51</b>	<b>0.005</b>
Nagelkerke pseudo R <sup>2</sup>		0.273				0.160				0.303		
Cox & Snell R <sup>2</sup>		0.165				0.078				0.203		
Hosmer-Lemeshow GOF test (sig.)		4.21 (0.838)				10.35 (0.242)				4.49 (0.810)		
Overall percentage correctly classified		84.2%				90.2%				79.9%		

Notes: aOR = adjusted odds ratio; CI = confidence interval;  $\beta$  = beta value; statistically significant results in boldface.

schoolwork problems (aOR = 1.59, 95% CI 1.18, 2.13;  $p = 0.002$ ), and bullying victimization (aOR = 1.48, 95% CI 1.09, 2.01;  $p = 0.013$ ) were significantly associated with increased odds of sexual violence victimization.

### 3.6. Gender differences and commonalities in associated factors

As shown in Table 2, no factor emerged as uniquely associated with sexual violence victimization among males. However, among females, six factors emerged as uniquely associated with increased odds of sexual violence victimization: breakup (aOR = 2.74, 95% CI 1.82, 4.15;  $p < 0.001$ ), identifying as LGBT (aOR = 2.61, 95% CI 1.04, 6.52;  $p = 0.040$ ), conflict with parents (aOR = 2.13, 95% CI 1.40, 3.23;  $p < 0.001$ ), schoolwork problems (aOR = 1.97, 95% CI 1.36, 2.85;  $p < 0.001$ ), being in a polygamous family (aOR = 1.78, 95% CI 1.16, 2.73;  $p = 0.008$ ), and bullying victimization (aOR = 1.58, 95% CI 1.06, 2.35;  $p < 0.001$ ). Notably, Table 2 shows that across the overall sample, regardless of gender, being in a romantic relationship and physical abuse victimization were significantly associated with increased odds of sexual violence victimization.

## 4. Discussion

This study has shown three major findings: 1) approximately 2 out of 10 female adolescents and 1 out of 10 males reported sexual violence victimization during the past 12 months; 2) compared to males, sexual violence victimization in females was overwhelmingly associated with family and interpersonal adversities; and 3) being in a romantic relationship and physical abuse victimization were strongly associated with increased odds of sexual violence victimization among both boys and girls.

### 4.1. Prevalence of sexual violence victimization

The 12-month prevalence estimates reported in this study (overall = 17.6%; female = 24.3%; male = 10.4%) are within recent ranges of estimates reported in high-income countries and across Africa (Barth, Bermetz, Heim, Trelle, & Tonia, 2013; Finkelhor, Shattuck, Turner, & Hamby, 2014; Hillis, Mercy, Amobi, & Kress, 2016; Pereda, Guilera, Forns, & Gómez-Benito, 2009; Saewyc, Pettingell, & Magee, 2003; UNICEF, 2014b). This comparable finding supports the evidence that sexual abuse of children and adolescents is a global problem (Every Woman Every Child, 2015; Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002; UNICEF, 2014b; UNICEF et al., 2020; WHO, 2021). Similarly, the current school-based estimates are comparable with the 12-month household estimates from Ghana, 22.1% among females and 19.4% among males aged 15–19 years (Institute of Development Studies, Ghana Statistical Services, and Associates, 2016) — an indication also that the sexual abuse of children and adolescents is a national problem in Ghana.

Considering that child sexual abuse is generally underreported in Ghana (Ministry of Gender Children and Social Protection & UNICEF, 2015), the estimates in the current study could be pointing to the possibility that the problem of sexual violence victimization among school-going adolescents in urban Ghana may be more common than what we know. Although the estimate among males is relatively lower in the current study, perhaps, compared with the school environment, boys may be more vulnerable to sexual violence victimization within the community context in Ghana as found by the Institute of Development Studies et al. (2016).

Notably, though, only speculative and cautious comparisons can be made when contrasting the estimates of the current school-based study and those reported by the household-based study by the Institute of Development Studies et al. (2016). For example, both studies include different samples and measures. Even though in the current study more females than males reported sexual violence victimization, the firm position of this study is that boys who experience sexual violence victimization should not be overlooked, as the estimates also underscore the fact that boys are not exempt from sexual violence victimization. Thus, perhaps, as recommended by UNICEF and leading researchers (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002; Moynihan et al., 2018; UNICEF, 2014b; Wekerle, 2018), it is now imperative to give equal attention — as given to girls — to the understanding and prevention of sexual abuse of boys, particularly, in LAMICs (Adjei & Saewyc, 2017; Hounmenou, 2017; Sumner et al., 2016).

### 4.2. Factors associated with sexual violence victimization

The finding that female gender was associated with nearly three times the odds of sexual violence victimization is consistent with the global evidence that girls, compared with boys, are at increased risk of sexual, physical, and psychological abuse (Finkelhor, Shattuck, Turner, & Hamby, 2014; Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002; UNICEF, 2014a, 2014b; UNICEF et al., 2020). This is to be expected in the current study given that, relative to boys, girls are less supported by the strict patriarchal gender norms (i.e., the socio-cultural norms that emphasize male assertiveness, domination and social control over women and children) which tend to undergird gender-based violence in Ghana (Institute of Development Studies et al., 2016; Nukunya, 2016; UNFPA - Ghana, 2016). However, emerging evidence suggests that across the world, even though boys may be equally exposed and vulnerable to sexual violence victimization, they tend to have difficulties with reporting their victimization (Easton, 2020; UNICEF, 2014b). The challenges of masculinity and strong acceptance of patriarchal gender norms have been implicated for the nondisclosure of sexual violence victimization among boys — and males in general (Institute of Development Studies et al., 2016; Nguyen et al., 2018; UNICEF, 2014b).

Considering that sexual violence is often inflicted through the use of aggression or physical force by the perpetrators (UNICEF, 2014b), it should be expected that survivors of sexual violence victimization would most likely also report high levels of physical abuse victimization. Evidence from Ghana shows that perpetrators of sexual violence often use violent approaches (e.g., gaging, slapping, kicking, and tying) to elicit compliance from their victim — regardless of the victim's gender (Quarshie et al., 2018; Quarshie, Osafo, Akotia, Peprah, & Andoh-Arthur, 2017).

Interestingly, this study has found that being in a romantic relationship is a correlate of sexual violence victimization in both boys and girls. This evidence could be pointing to two realities. Firstly, the finding could be confirming the well-documented evidence that romantic relationships and marriages still remain the main avenues where intimate partner sexual violence is perpetrated by boys and men against girls and women in Ghana (Institute of Development Studies et al., 2016; Ogum Alangea et al., 2018; Sikweyiya et al., 2020). Secondly, besides implying that boys are not immune to intimate partner sexual violence victimization, the finding may also be indicative of the emerging encouraging evidence that boys (and men) in intimate relationship are beginning to disclose or report sexual violence victimization (Institute of Development Studies et al., 2016; UNICEF, 2014b). Taken together, this finding implies that boys should not be overlooked in the designing and targeting of intimate partner sexual violence intervention and prevention programs for young people (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002; Russell, Higgins, & Posso, 2020; UNICEF, 2014b).

Relatedly, having had a breakup also emerged as a correlate of sexual violence victimization, particularly, among girls. Even though potential explanations are not clear from this study, there is evidence from Ghana to suggest that girls who initiate romantic relationship breakups tend to be sexually assaulted by the jilted boyfriend or ex-partner. For example, a recent study has revealed that some gang rapes are initiated by boys as a way of 'punishing' the victim (usually a girl) for ending a romantic relationship with a member of the gang (Quarshie et al., 2018). It is possible that sexual violence victimization may precede breakup, but this is also not readily explicable from the current data. Future studies, including cohort designs and qualitative approaches, could explore further the nature of the relationship between breakup (as an antecedent) and sexual violence victimization.

The finding that identifying as a sexual or gender minority is associated with sexual violence victimization, mainly, among females confirms UNICEF's recent concern that girls who identify as sexual minority still remain marginalised and vulnerable to sexual violence victimization (UNICEF et al., 2020). Current evidence from Ghana suggests that, compared to adolescents who identify as heterosexual, LGBT adolescents tend to report more social adversities, including sexual abuse, physical abuse, and bullying victimization (Quarshie, Waterman, & House, 2020a). The vulnerability of LGBT girls could be unsettling, as their risk could stem from two combined entrenched social factors: stronger patriarchal gender norms that exert absolute control over girls' and women's sexuality, and the harsh homophobic social environment in Ghana.

Another key correlate found is conflict with parents. Recent systematic reviews have shown that conflict with parents portends a risk for various negative public health outcomes among young people (Emond, 2020; Marsh, Dobson, & Maddison, 2020). Evidence suggests that family tension and heightened conflictual family environment could result in lowered self-esteem and self-blame among children and adolescent members, which in turn could increase child and adolescent vulnerability to various abuses and exploitation — including sexual violence victimization (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002; UNICEF, 2014b). Notably, however, it is also possible that sexual violence victimization could also lead to or precede conflict with parents. Recent evidence from Ghana suggests, for example, that, in many instances, a girl who gets sexually abused is blamed and labelled as a 'bad girl' by her family; her family tends to misinterpret the abuse as poor parenting (Tetteh & Markwei, 2018).

The current study has shown that girls from polygamous families are more likely to report sexual violence victimization. Whereas sexual abuse victimization has been reported by wives in polygamous marriages in Ghana (Institute of Development Studies et al., 2016), it is not readily clear from the current study what could account for sexual violence victimization among girls in polygamous families. Perhaps, as reported from some countries that recognize polygamous (marriages and) families, the often larger size, low socio-economic status, and domestic conflicts that characterize polygamous families could result in the neglect and abuse of children and adolescents, particularly, girls (Elbedour, Abu-Bader, Onwuegbuzie, Abu-Rabia, & El-Aassam, 2006). Clearly, more evidence is needed to clarify the association between polygamous family and sexual violence victimization of girls.

Another interesting finding of this study is that schoolwork problems is a correlate of sexual violence victimization. Evidence from high-income countries suggests that sexually abused children and adolescents tend to experience academic underachievement, increased chance of dropping out, increased absenteeism, and more grade retention (Buckle, Lancaster, Powell, & Higgins, 2005; Daignault & Hebert, 2009; Wells, McCann, Adams, Voris, & Dahl, 1997). However, it is not clear how schoolwork problem can be an antecedent of sexual violence victimization. Whereas further studies from Ghana are needed to clarify this association, anecdotal evidence (mainly media reports) from the country indicate that underperforming students have been sexually abused by some teachers who offered to provide individualized schoolwork support or free one-to-one tutoring to students experiencing schoolwork problems (Abbey, 2020).

Relatedly, consistent with previous evidence from Ghana (Ohene, Johnson, Atunah-Jay, Owusu, & Borowsky, 2015), bullying victimization emerged in the current study as a significant correlate of sexual abuse victimization; however, authors of the previous study failed to provide any explanation for this association (Ohene, Johnson, Atunah-Jay, Owusu, & Borowsky, 2015). It is noteworthy that the explanation for the association between bullying victimization and sexual violence victimization is not straightforward, as several factors could mediate this association. For example, evidence from China suggests that victims of bullying are likely to also suffer sexual abuse victimization where the family structure is weakened by the absence of parents/primary caregivers or lack of parental care, support and supervision (Yan et al., 2018). In sub-Saharan Africa, the lack of a father — due to death or absence — from the home has been implicated for sexual abuse of adolescents (Kidman & Palermo, 2016). However, it is also worth mentioning that the highly stigmatised nature of sexual violence victimization is likely to make bullying victimization an 'after-effect' of sexual violence victimization. School-going adolescent victims of sexual violence are also likely to be bullied after surviving the sexual violence victimization (Hébert, Cénat, Blais, Lavoie, & Guerrier, 2016). Put together, the evidence of the current study and the fact that bullying is a common occurrence in schools in Ghana (Owusu, Hart, Oliver, & Kang, 2011) warrant further studies to explicate the association between bullying victimization and sexual abuse victimization in Ghanaian schools.

Notably, also, it is not clear from the evidence of the current study whether the family-related factors (e.g., conflict with parents) or school related factors (e.g., schoolwork problems, bullying victimization) also imply that the act of sexual violence victimization

occurs within the family or in the school environment. Further research, including qualitative studies, are needed to clarify the association between the factors and the contexts of the offence. Evidence of such studies would be informative for designing targeted intervention and prevention regimes.

#### 4.3. Implications and recommendations

The key findings of the current study have implications for research and intervention and prevention programs. Clearly, more research is needed to expand the evidence on the specific forms of sexual violence and where they mostly occur, in order to inform intervention and prevention efforts in Ghana. The prevalence estimates in this study also underscore the need for intervention and prevention programs not only at the individual level (e.g., helping adolescents to stay at school and teaching them emotional and social skills), family context (e.g., teaching supportive parenting skills) or school environment (e.g., enforcing existing anti-bullying policies), but also warrants multi-sectoral approaches at the population level – where community prevention efforts are targeted at reducing prevalence rates through enforcement of child protection laws, pursuing poverty reducing policies, and instituting support systems (Collin-Vézina, Daigneault, & Hébert, 2013; Dako-Gyeke, 2019; Hillis, Mercy, Amobi, & Kress, 2016; Russell, Higgins, & Posso, 2020). Put differently, the findings of this study support and resonate with the need for Ghana to consider seriously the six strategies for action suggested by UNICEF and leading researchers towards preventing and responding to violence against and abuse of children and adolescents (Southall & MacDonald, 2013; UNICEF, 2014a). These recommended strategies have been found to be potentially useful in the African context (Badoe, 2017). It is recommended, however, that the adoption and adaptation of these six strategies must be based on sound contextually-relevant and culturally-sensitive research (Broaddus-Shea, Scott, Reijnders, & Amin, 2019; Russell, Higgins, & Posso, 2020).

#### 4.4. Strengths and limitations

This study is largely in response to the call for expansive evidence on child sexual abuse among young people in sub-Saharan Africa (Lalor, 2004; Meinck, Cluver, Boyes, & Mhlongo, 2014; Veenema, Thornton, & Corley, 2015) but also, particularly, in response to sexual abuse of adolescent boys (Adjei & Saewyc, 2017; Moynihan et al., 2018; Wekerle, 2018). Besides being more recent, the current study presents evidence on sexual violence victimization among Second Cycle School students; it represents the first study to report 12-month prevalence estimates of the phenomenon among Second Cycle students in urban Ghana. Nonetheless, the findings must be interpreted and adopted with caution, due to some notable limitations. There is evidence to suggest that studies involving retrospective reporting of sexual violence victimization are susceptible to error in recall, and feelings of guilt and shame, loss of self-worth, and social desirability might increase nondisclosure (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002; Murray, Nguyen, & Cohen, 2014). Children and young people who survive sexual violence victimization may be traumatized; thus, unwilling to report, discuss openly or revisit the abuse (Deloitte Access Economics, 2019). However, in the current study social desirability bias might be low, as participants were allowed enough privacy in responding to the survey: an anonymous self-report questionnaire was used; during the survey, teachers were kept in the background and participants sat far apart from one another.

Considering that gender and sexual minorities experience sexual violence differently (Caputi, Shover, & Watson, 2020; Müller et al., 2021), it would have been more meaningful to stratify or separate the non-heterosexual sample into identifiable categories during the analysis in the current study. However, this was impossible, as the non-heterosexual (LGBT) sample was underpowered. Future studies could strive to include a relatively larger sample size of sexual and gender minority adolescents to facilitate meaningful subgroup analysis.

Also, causal interpretations of the findings are not possible, given the cross-sectional approach used. Whereas the findings may be extrapolated across urban school-going adolescents, they are not necessarily applicable to adolescents in rural Ghana. Although the definition of sexual violence victimization was provided to participants, it is possible that the single-item measure of sexual violence victimization applied in this study might have been less elaborate and inadequate in capturing the complete nuances of sexual violence victimization. Future studies may consider applying validated multi-item measures with satisfactory contextual relevance.

## 5. Conclusion

The prevalence of sexual violence victimization among school-going adolescents in urban Ghana compares with estimates from other sub-Saharan African countries, but also warrants the need for universal and targeted intervention and prevention programs to mitigate the offence against both school-going adolescent boys and girls in urban Ghana.

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.chiabu.2021.105227>.

#### Role of funding sources

This study was supported by the Leeds International Research Scholarship (LIRS) at the University of Leeds, School of Psychology, in the form of a doctoral scholarship to the lead author (Grant N<sup>o</sup>: CFN/sy/200631403). The funder of the study had no role in the study design, data collection, data analysis, data interpretation, or writing of the report. The views expressed in this paper are those of the author and not necessarily those of the LIRS.

## Availability of data and material

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

## Declaration of competing interest

The author declares that they have no competing interests.

## References

- Abbey, E. E. (2020). Teacher jailed 10 years for sodomising boy, 12. Graphic online <https://www.graphic.com.gh/news/general-news/teacher-jailed-10-years-for-sodomising-boy-12.html>.
- Adjei, J. K., & Saewyc, E. M. (2017). Boys are not exempt: Sexual exploitation of adolescents in sub-Saharan Africa. *Child Abuse & Neglect*, 65, 14–23. <https://doi.org/10.1016/j.chiabu.2017.01.001>
- Alix, S., Cossette, L., Cyr, M., Frappier, J.-Y., Caron, P.-O., & Hébert, M. (2020). Self-blame, shame, avoidance, and suicidal ideation in sexually abused adolescent girls: A longitudinal study. *Journal of Child Sexual Abuse*, 29(4), 432–447. <https://doi.org/10.1080/10538712.2019.1678543>
- Babiyak, M. A. (2004). What you see may not be what you get: A brief, nontechnical introduction to overfitting in regression-type models. *Psychosomatic Medicine*, 66(3), 411–421. <https://doi.org/10.1097/00006842-200405000-00021>
- Badoe, E. (2017). A critical review of child abuse and its management in Africa. *African Journal of Emergency Medicine*, 7, S32–S35. <https://doi.org/10.1016/j.afjem.2017.09.002>
- Barth, J., Bermetz, L., Heim, E., Trelle, S., & Tonia, T. (2013). The current prevalence of child sexual abuse worldwide: A systematic review and meta-analysis. *International Journal of Public Health*, 58(3), 469–483. <https://doi.org/10.1007/s00038-012-0426-1>
- Broadus-Shea, E. T., Scott, K., Reijnders, M., & Amin, A. (2019). A review of the literature on good practice considerations for initial health system response to child and adolescent sexual abuse. *Child Abuse & Neglect*, Article 104225. <https://doi.org/10.1016/j.chiabu.2019.104225>
- Buckle, S. K., Lancaster, S., Powell, M. B., & Higgins, D. J. (2005). The relationship between child sexual abuse and academic achievement in a sample of adolescent psychiatric inpatients. *Child Abuse & Neglect*, 29(9), 1031–1047. <https://doi.org/10.1016/j.chiabu.2004.12.013>
- Caputi, T. L., Shover, C. L., & Watson, R. J. (2020). Physical and sexual violence among gay, lesbian, bisexual, and questioning adolescents. *JAMA Pediatrics*, 174(8), 791–793. <https://doi.org/10.1001/jamapediatrics.2019.6291>
- Collin-Vézina, D., Daigneault, I., & Hébert, M. (2013). Lessons learned from child sexual abuse research: Prevalence, outcomes, and preventive strategies. *Child and Adolescent Psychiatry and Mental Health*, 7(1), 22. <https://doi.org/10.1186/1753-2000-7-22>
- Daigneault, I. V., & Hébert, M. (2009). Profiles of school adaptation: Social, behavioral and academic functioning in sexually abused girls. *Child Abuse & Neglect*, 33(2), 102–115. <https://doi.org/10.1016/j.chiabu.2008.06.001>
- Dako-Gyeke, M. (2019). Perspectives of key informants on child abuse: Qualitative evidence from northern Ghana. *Child and Adolescent Social Work Journal*, 36(2), 155–169. <https://doi.org/10.1007/s10560-018-0560-6>
- Deloitte Access Economics. (2019). *The economic cost of violence against children and young people: Advocate for children and young people*. Deloitte Access Economics Pty Ltd.
- Department of Social Welfare, Ricerca e Cooperazione, Catholic Action for Street Children, & Street Girls Aid. (2011). *Census on street children in the Greater Accra region, Ghana*.
- Easton, S. D. (2020). Disclosure of child sexual abuse: Directions for breaking new ground. *Child Abuse and Neglect*, 99, e104287. <https://doi.org/10.1016/j.chiabu.2019.104287>
- Elbedour, S., Abu-Bader, S., Onwuegbuzie, A. J., Abu-Rabia, A., & El-Aassam, S. (2006). The scope of sexual, physical, and psychological abuse in a Bedouin-Arab community of female adolescents: The interplay of racism, urbanization, polygamy, family honor, and the social marginalization of women. *Child Abuse & Neglect*, 30(3), 215–229. <https://doi.org/10.1016/j.chiabu.2005.10.010>
- Emond, J. A. (2020). Household chaos: A risk factor for adverse child outcomes gains attention in public health. *BMC Public Health*, 20(1), 1–4. <https://doi.org/10.1186/s12889-020-08680-y>
- Every Woman Every Child. (2015). The global strategy for women's, children's and adolescents' health (2016–2030). *Every Woman Every Child (EWEC)*. [http://www.who.int/pmnch/media/events/2015/gs\\_2016\\_30.pdf](http://www.who.int/pmnch/media/events/2015/gs_2016_30.pdf).
- Finkelhor, D., Shattuck, A., Turner, H. A., & Hamby, S. L. (2014). The lifetime prevalence of child sexual abuse and sexual assault assessed in late adolescence. *Journal of Adolescent Health*, 55(3), 329–333. <https://doi.org/10.1016/j.jadohealth.2013.12.026>
- Ghana Statistical Service. (2013). *2010 population & housing census report. Children, adolescents & young people in Ghana*. GSS.
- Graham, J. W. (2009). Missing data analysis: Making it work in the real world. *Annual Review of Psychology*, 60, 549–576. <https://doi.org/10.1146/annurev.psych.58.110405.085530>
- Graham, J. W. (2012). *Missing data: Analysis and design*. Springer.
- Greenland, S., Senn, S. J., Rothman, K. J., Carlin, J. B., Poole, C., Goodman, S. N., & Altman, D. G. (2016). Statistical tests, P values, confidence intervals, and power: A guide to misinterpretations. *European Journal of Epidemiology*, 31(4), 337–350. <https://doi.org/10.1007/s10654-016-0149-3>
- Hébert, M., Cénat, J. M., Blais, M., Lavoie, F., & Guerrier, M. (2016). Child sexual abuse, bullying, cyberbullying, and mental health problems among high schools students: A moderated mediated model. *Depression and Anxiety*, 33(7), 623–629. <https://doi.org/10.1002/da.22504>
- Hillis, S., Mercy, J., Amobi, A., & Kress, H. (2016). Global prevalence of past-year violence against children: A systematic review and minimum estimates. *Pediatrics*, 137(3), Article e20154079. <https://doi.org/10.1542/peds.2015-4079>
- Hounmenou, C. (2017). An initial exploration of prostitution of boys in the West African region. *Child Abuse & Neglect*, 69, 188–200. <https://doi.org/10.1016/j.chiabu.2017.04.027>
- Institute of Development Studies, Ghana Statistical Services, & Associates. (2016). *Domestic violence in Ghana: Incidence, attitudes, determinants and consequences*. Institute of Development Studies.
- Jewkes, R., Stern, E., & Ramsoomar, L. (2019). Preventing violence against women and girls: Community activism approaches to shift harmful gender attitudes, roles and social norms. *Evidence review*. In *What works to prevent violence*.
- Kidman, R., & Palermo, T. (2016). The relationship between parental presence and child sexual violence: Evidence from thirteen countries in sub-Saharan Africa. *Child Abuse & Neglect*, 51, 172–180. <https://doi.org/10.1016/j.chiabu.2015.10.018>
- Kim, H.-Y. (2017). Statistical notes for clinical researchers: Chi-squared test and Fisher's exact test. *Restorative Dentistry & Endodontics*, 42(2), 152–155. <https://doi.org/10.5395/rde.2017.42.2.152>
- Klonsky, E. D., & Moyer, A. (2008). Childhood sexual abuse and non-suicidal self-injury: Meta-analysis. *The British Journal of Psychiatry*, 192(3), 166–170. <https://doi.org/10.1192/bjp.bp.106.030650>
- Krug, E. G., Dahlberg, L. L., Mercy, J. A., Zwi, A. B., & Lozano, R. (Eds.). (2002). *World report on violence and health*. World Health Organization.
- Lalor, K. (2004). Child sexual abuse in sub-Saharan Africa: A literature review. *Child Abuse & Neglect*, 28(4), 439–460. <https://doi.org/10.1016/j.chiabu.2003.07.005>
- Marsh, S., Dobson, R., & Maddison, R. (2020). The relationship between household chaos and child, parent, and family outcomes: A systematic scoping review. *BMC Public Health*, 20, 1–27. <https://doi.org/10.1186/s12889-020-08587-8>

- McTavish, J. R., Sverdlichenko, I., MacMillan, H. L., & Wekerle, C. (2019). Child sexual abuse, disclosure and PTSD: A systematic and critical review. *Child Abuse & Neglect*, 92, 196–208. <https://doi.org/10.1016/j.chiabu.2019.04.006>
- Meinck, F., Cluver, L. D., Boyes, M. E., & Mhlongo, E. L. (2014). Risk and protective factors for physical and sexual abuse of children and adolescents in Africa. *Trauma, Violence, & Abuse*, 16(1), 81–107. <https://doi.org/10.1177/1524838014523336>
- Ministry of Gender Children and Social Protection, & UNICEF. (2015). *Report on investment, budgeting and economic burden of child protection violations in Ghana*. Accra, Ghana: MOGCSF and UNICEF.
- Moynihan, M., Mitchell, K., Pitcher, C., Havaei, F., Ferguson, M., & Saewyc, E. (2018). A systematic review of the state of the literature on sexually exploited boys internationally. *Child Abuse & Neglect*, 76, 440–451. <https://doi.org/10.1016/j.chiabu.2017.12.003>
- Müller, A., Daskilewicz, K., Mmolai-Chalmers, A., Morroni, C., Muparamoto, N., Muula, A. S., ... Zimba, M. (2021). Experience of and factors associated with violence against sexual and gender minorities in nine African countries: A cross-sectional study. *BMC Public Health*, 21(1), 1–11. <https://doi.org/10.1186/s12889-021-10314-w>
- Murray, L. K., Nguyen, A., & Cohen, J. A. (2014). Child sexual abuse. *Child and Adolescent Psychiatric Clinics of North America*, 23(2), 321–337. <https://doi.org/10.1016/j.jchc.2014.01.003>
- Nguyen, K. H., Kress, H., Atuchukwu, V., Onotu, D., Swaminathan, M., Ogbanufe, O., ... Sumner, S. A. (2018). Disclosure of sexual violence among girls and young women aged 13 to 24 years: Results from the violence against children surveys in Nigeria and Malawi. *Journal of Interpersonal Violence*, Article 0886260518757225. <https://doi.org/10.1177/0886260518757225>
- Nukunya, G. K. (2016). *Tradition and change in Ghana: An introduction to sociology — Revised and expanded edition*. Woeli Publishing Services.
- Ogum Alangea, D., Addo-Lartey, A. A., Sikweyiya, Y., Chirwa, E. D., Coker-Appiah, D., Jewkes, R., & Adanu, R. M. K. (2018). Prevalence and risk factors of intimate partner violence among women in four districts of the central region of Ghana: Baseline findings from a cluster randomised controlled trial. *PLoS One*, 13(7), Article e0200874. <https://doi.org/10.1371/journal.pone.0200874>
- Ohene, S.-A., Johnson, K., Atunah-Jay, S., Owusu, A., & Borowsky, I. W. (2015). Sexual and physical violence victimization among senior high school students in Ghana: Risk and protective factors. *Social Science & Medicine*, 146, 266–275. <https://doi.org/10.1016/j.socscimed.2015.10.019>
- Owusu, A. (2012). *Global school-based student health survey (GSHS): Ghana report*. Middle Tennessee State University, Ghana Education Service, & WHO.
- Owusu, A., Hart, P., Oliver, B., & Kang, M. (2011). The association between bullying and psychological health among senior high school students in Ghana, West Africa. *Journal of School Health*, 81(5), 231–238. <https://doi.org/10.1111/j.1746-1561.2011.00590.x>
- Pereda, N., Guilera, G., Forns, M., & Gómez-Benito, J. (2009). The prevalence of child sexual abuse in community and student samples: A meta-analysis. *Clinical Psychology Review*, 29(4), 328–338. <https://doi.org/10.1016/j.cpr.2009.02.007>
- Prematunga, R. K. (2012). Correlational analysis. *Australian Critical Care*, 25(3), 195–199. <https://doi.org/10.1016/j.aucc.2012.02.003>
- Quarshie, E. N.-B., Davies, P. A., Badasu, M. I. A., Tagoe, T., Otoo, P. A., & Afriyie, P. O. (2018). Multiple perpetrator rape in Ghana: Offenders, victims and offence characteristics. *Journal of Sexual Aggression*, 24(1), 125–141. <https://doi.org/10.1080/13552600.2017.1378024>
- Quarshie, E. N.-B., Osafo, J., Akotia, C. S., Peparah, J., & Andoh-Arthur, J. (2017). Some epidemiological characteristics of perpetrators and victims of incest in contemporary Ghana: Analysis of media reports. *Journal of Child Sexual Abuse*, 26(2), 121–139. <https://doi.org/10.1080/10538712.2016.1277573>
- Quarshie, E. N.-B. (2019). *Self-harm in adolescents in Ghana* (Doctoral Thesis). University of Leeds, Leeds, United Kingdom. Retrieved from <http://etheses.whiterose.ac.uk/25720/>.
- Quarshie, E. N.-B., Waterman, M. G., & House, A. O. (2020a). Prevalence of self-harm among lesbian, gay, bisexual, and transgender adolescents: A comparison of personal and social adversity with a heterosexual sample in Ghana. *BMC Research Notes*, 13(1), 1–6. <https://doi.org/10.1186/s13104-020-05111-4>
- Quarshie, E. N.-B., Waterman, M. G., & House, A. O. (2020b). Self-harm with suicidal and non-suicidal intent in young people in sub-Saharan Africa: A systematic review. *BMC Psychiatry*, 20(234), 1–26. <https://doi.org/10.1186/s12888-020-02587-z>
- Quarshie, E. N.-B., Shuweihdi, F., Waterman, M., & House, A. (2021). Self-harm among in-school and street-connected adolescents in Ghana: a cross-sectional survey in the Greater Accra region. *BMJ Open*, 11, Article e041609. <https://doi.org/10.1136/bmjopen-2020-041609>
- Russell, D., Higgins, D., & Posso, A. (2020). Preventing child sexual abuse: A systematic review of interventions and their efficacy in developing countries. *Child Abuse & Neglect*, 102, Article 104395. <https://doi.org/10.1016/j.chiabu.2020.104395>
- Saewyc, E. M., Pettingell, S., & Magee, L. L. (2003). The prevalence of sexual abuse among adolescents in school. *The Journal of School Nursing*, 19(5), 266–272. <https://doi.org/10.1177/10598405030190050401>
- Sikweyiya, Y., Addo-Lartey, A. A., Alangea, D. O., Dako-Gyeke, P., Chirwa, E. D., Coker-Appiah, D., ... Jewkes, R. (2020). Patriarchy and gender-inequitable attitudes as drivers of intimate partner violence against women in the central region of Ghana. *BMC Public Health*, 20, 1–11. <https://doi.org/10.1186/s12889-020-08825-z>
- Southall, D., & MacDonald, R. (2013). Protecting children from abuse: A neglected but crucial priority for the international child health agenda. *Paediatrics and International Child Health*, 33(4), 99–206. <https://doi.org/10.1179/2046905513Y.0000000097>
- Sumner, S. A., Mercy, J. A., Buluma, R., Mwangi, M. W., Marcelin, L. H., Kheam, T., ... Hillis, S. D. (2016). Childhood sexual violence against boys: A study in 3 countries. *Pediatrics*, 137(5), Article e20153386. <https://doi.org/10.1542/peds.2015-3386>
- Sun, G.-W., Shook, T. L., & Kay, G. L. (1996). Inappropriate use of bivariable analysis to screen risk factors for use in multivariable analysis. *Journal of Clinical Epidemiology*, 49(8), 907–916. [https://doi.org/10.1016/0895-4356\(96\)00025-X](https://doi.org/10.1016/0895-4356(96)00025-X)
- Tetteh, P. M., & Markwei, U. (2018). Situating the notion of “gbekɛfoɔs” in the discourse of child sexual abuse among the Ga in Accra, Ghana. *Journal of Child Sexual Abuse*, 27(5), 510–522. <https://doi.org/10.1080/10538712.2018.1477225>
- UNFPA - Ghana. (2016). *Situational analysis of adolescent girls and young women in Ghana- synthesizing data to identify and work with the most vulnerable young women*. UNFPA.
- UNICEF. (2014a). *Ending violence against children: Six strategies for action*. UNICEF.
- UNICEF. (2014b). *Hidden in plain sight: A statistical analysis of violence against children*. UNICEF.
- UNICEF, UN Women, & Plan International. (2020). *A new era for girls: Taking stock of 25 years of progress*. UNICEF.
- Veenema, T. G., Thornton, C. P., & Corley, A. (2015). The public health crisis of child sexual abuse in low and middle income countries: An integrative review of the literature. *International Journal of Nursing Studies*, 52(4), 864–881. <https://doi.org/10.1016/j.ijnurstu.2014.10.017>
- Von Elm, E., Altman, D. G., Egger, M., Pocock, S. J., Gøtzsche, P. C., & Vandenbroucke, J. P. (2007). The Strengthening of Reporting of Observational Studies in Epidemiology (STROBE) statement: Guidelines for reporting observational studies. *Annals of Internal Medicine*, 147(8), 573–577. <https://doi.org/10.7326/0003-4819-147-8-200710160-00010>
- Wekerle, C. (2018). Are you listening? Giving a voice to male victims of child sexual abuse. *Research Features: Health & Medicine*. <https://researchfeatures.com/2018/05/29/giving-voice-male-victims-child-sexual-abuse/>
- Wells, R., McCann, J., Adams, J., Voris, J., & Dahl, B. (1997). A validation study of the structured interview of symptoms associated with sexual abuse (SASA) using three samples of sexually abused, allegedly abused, and nonabused boys. *Child Abuse & Neglect*, 21(12), 1159–1167. [https://doi.org/10.1016/S0145-2134\(97\)00091-4](https://doi.org/10.1016/S0145-2134(97)00091-4)
- WHO. (2021). *Violence against women prevalence estimates, 2018: Global, regional and national prevalence estimates for intimate partner violence against women and global and regional prevalence estimates for non-partner sexual violence against women*. Geneva: World Health Organization.
- Yan, L., Zhu, Q., Tu, X., Zuo, X., Yu, C., Lou, C., & Lian, Q. (2018). Bullying victimization and child sexual abuse among left-behind and non-left-behind children in China. *PeerJ*, 6, Article e4865. <https://doi.org/10.7717/peerj.4865>